BRUHAT BANGALORE MAHANAGARA PALIKE

Project: 13.Improvement to Roads and Drains in Bhadrappa Layout and Surrounding area in Ward No.08

Est Cost: =100.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	Removing and resetting of footpath slab (P.No.265, I.No.37.56 of PW, P&IWTD SR 2016-17)								
	Kodigehalli Main Road	Sqm							
	LHS								
	Ch 250-660		1	410.00	0.90	--	369.00		
	Damaged slabs/missing 20%						-73.80		
							295.20	132.50	**39114.00**
	Basic rate (issue Rate)	125.00							
	Area Weightage 6%	7.50							
	Final Rate	**132.50**							
2	Providing and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	Damaged slabs/missing 20%						73.80		
	LHS	Sqm							
	Ch 0-233		1	233.00	1.00	--	233.00		
	RHS								
	Ch 0-233		1	233.00	1.00	--	233.00		
							539.80	1738.00	**938172.40**
	Data rate	1738.00							
3	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Kodigehalli Main Road								
	LHS								
	Ch 250-660		1	410.00	0.60	0.40	98.40		
	New Drain								
	Ch 0-233		1	233.00	1.10	0.85	217.86		
	RHS								
	Ch 0-233		1	233.00	1.10	0.85	217.86		
							534.11	202.92	**108381.60**
	Basic rate	82.00							
	Loading and unloading with 15km lead= 68+2.50x1.28x15 = 116	116.00							
	Sub Total	198.00							
	Area Weightage 6%	4.92							
	Final Rate	**202.92**							
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Kodigehalli Main Road	Cum							
	LHS								
	Ch 0-233		1.00	233.00	1.10	0.10	25.63		
	RHS								
	Ch 0-233		1.00	233.00	1.10	0.10	25.63		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
							51.26	5348.76	**274177.44**
	Basic rate	5046.00							
	Area Weightage 6%	302.76							
	Final Rate	**5348.76**							
5	Providing laying plain/ reinforced cement concrete M20 Grade for Box Drain walls of thickness 10cm to 20cm including centering shuttering for work etc. complete as per approved drawing and design MORTH specification No. 1500, 1700, 2200. (P.No.265, I.No.37.59.2 of PW, P&IWTD SR 2016-17)								
	Bottom Raft	Cum							
	LHS								
	Ch 0-233		1.00	233.00	0.90	0.15	31.46		
	RHS								
	Ch 0-233		1.00	233.00	0.90	0.15	31.46		
	Walls								
	LHS								
	Ch 0-233		2.00	233.00	0.15	0.60	41.94		
	RHS								
	Ch 0-233		2.00	233.00	0.15	0.60	41.94		
							146.79	11032.48	**1619457.74**
	Basic rate	10408.00							
	Area Weightage 6%	624.48							
	Final Rate	**11032.48**							
6	KSRB - 4.9.2: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3. (P.No.17, I.No.4.46.3 of PW, P&IWTD SR 2016-17)								
	Consider 50Kgs/cum for Drain	Tonne		146.79	0.050	--	7.34		
							7.34	64243.42	**471546.70**
	Basic rate	60607.00							
	Area Weightage 6%	3636.42							
	Final Rate	**64243.42**							
8	Removing and resetting of kerb stones(P.No.185, I.No.37.57 of PW,P&IWTD SR 2016-17)								
	Kerbs	No.							
	LHS								
	Ch 362-660		1.00	298.00	--	/0.45	662.00		
	Ch 250-362		1.00	112.00	--	/0.45	249.00		
	Ch 0-233		2.00	233.00	--	/0.45	1036.00		
	Medians								
	Ch 488-660		2.00	172.00	--	/0.45	764.00		
	Consider 35% for Damaged and Missing Slabs						-948.85		
							1762.15	65.72	**115808.50**
	Basic rate	62.00							
	Area Weightage 6%	3.72							
	Final Rate	**65.72**							
9	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete. (P.No.25, I.No.5.30 of PW,P&IWTD S.R 2016-17)								
	Kerbs	No.							
	New Kerbs								
	Consider 35% for Damaged and Missing Slabs						948.85		
							948.85	331.78	**314809.45**

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Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	Basic rate	313.00							
	Area Weightage 6%	18.78							
	Final Rate	**331.78**							
10	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (P.No.182, I.No. 24.1 of PW,P&IWTD SR 2016-17)								
	Kerbs	Sqm							
	LHS								
	Ch 362-660		1	298.00	--	0.35	104.30		
	Ch 250-362		1	112.00	--	0.35	39.20		
	Ch 0-233		2	233.00	--	0.35	163.10		
	Medians								
	Ch 488-660		2	172.00	--	0.35	120.40		
							427.00	63.60	**27157.20**
	Basic rate	60.00							
	Area Weightage 6%	3.60							
	Final Rate	**63.60**							
11	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Kodigehalli Main Road widening								
	RHS								
	Ch 362-660		1	298.00	3.20	0.25	238.40		
	Ch 261-362		1	101.00	3.20	0.25	80.80		
							319.20	164.76	**52591.39**
	Basic rate	46.00							
	Loading and unloading with 15km lead= 68+2.50x1.28x15 = 116	116.00							
	Sub Total	162.00							
	Area Weightage 6%	2.76							
	Final Rate	**164.76**							
12	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Kodigehalli Main Road widening	Cum							
	RHS								
	Ch 362-660		1.00	298.00	3.20	0.25	238.40		
	Ch 261-362		1.00	101.00	3.20	0.25	80.80		
							319.20	1768.08	**564371.14**
	Basic rate	1668.00							
	Area Weightage 6%	100.08							
	Final Rate	**1768.08**							
13	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Kodigehalli Main Road widening	Sqm							
	RHS								
	Ch 362-660		1.00	298.00	3.20	--	953.60		
	Ch 261-362		1.00	101.00	3.20	--	323.20		
							1276.80	27.56	**35188.61**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	Basic rate	26.00							
	Area Weightage 6%	1.56							
	Final Rate	**27.56**							
14	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Kodigehalli Main Road	Sqm							
	Ch 250-680		1.00	430.00	8.95	--	3848.50		
	Ch 0-233		1.00	233.00	9.20	--	2143.60		
							5992.10	3.18	**19054.88**
	Basic rate	3.00							
	Area Weightage 6%	0.18							
	Final Rate	**3.18**							
15	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
		Sqm							
	For Laying DBM								
	Kodigehalli Main Road widening								
	RHS								
	Ch 362-660		1.00	298.00	3.20	--	953.60		
	Ch 261-362		1.00	101.00	3.20	--	323.20		
	Kodigehalli Main Road								
	Ch 250-680		1.00	430.00	8.95	--	3848.50		
	Ch 0-233		1.00	233.00	9.20	--	2143.60		
	For Laying BC								
	Kodigehalli Main Road widening								
	RHS								
	Ch 362-660		1	298.00	3.20	--	953.60		
	Ch 261-362		1	101.00	3.20	--	323.20		
	Kodigehalli Main Road								
	Ch 250-680		1.00	430.00	8.95	--	3848.50		
	Ch 0-233		1.00	233.00	9.20	--	2143.60		
							14537.80	12.72	**184920.82**
	Basic rate	12.00							
	Area Weightage 6%	0.72							
	Final Rate	**12.72**							
16	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	Kodigehalli Main Road widening	Cum							
	RHS								
	Ch 362-660		1	298.00	3.20	0.05	47.68		
	Ch 261-362		1	101.00	3.20	0.05	16.16		
	Kodigehalli Main Road								
	Ch 250-680		1	430.00	8.95	0.05	192.43		
	Ch 0-233		1	233.00	9.20	0.05	107.18		
							363.45	7120.02	**2587735.67**
	Basic rate	6717.00							
	Area Weightage 6%	403.02							

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Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	Final Rate	**7120.02**							
17	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Kodigehalli Main Road widening	Cum							
	RHS								
	Ch 362-660		1	298.00	3.20	0.04	38.14		
	Ch 261-362		1	101.00	3.20	0.04	12.93		
	Kodigehalli Main Road								
	Ch 250-680		1	430.00	8.95	0.04	153.94		
	Ch 0-233		1	233.00	9.20	0.04	85.74		
							290.76	8118.54	**2360514.22**
	Basic rate (issue Rate)	7659.00							
	Area Weightage 6%	459.54							
	Final Rate	**8118.54**							
18	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	663.00	0.10	--	132.60		
	Center Line		0.5	663.00	0.10	--	33.15		
							165.75	542.72	**89955.84**
	Basic rate	512.00							
	Area Weightage 6%	30.72							
	Final Rate	**542.72**							
							Total Construction Cost		**9802957.600**
20							**Cost towards PMC / Third Party inspection LS**		**196060.00**
								Sub Total	**9999017.60**
21							**Miscellaneous and rounding off**		**982.40**
								Total	**10000000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Tejus Consultants

Assistant Engineer | Assistant Executive Engineer | Executive Engineer

18/6/18

Technical Sanction
Accorded For 100' GW Layout
Head of A/C P.3035
CER NO :TS/07/18-19 Dt: 21/06/18

[TA] [CE (YNK)]